March 31, 2003

IFAFS Cheatgrass Control & Range Restoration Project

Herbicide Application

**Product:** Roundup Ultra (3L) (glyphosate)

**Rate:** 12 fl oz/ac.; 0.375 pounds a.i./ac.

**Timing:** Following emergence of 20 to 30% of the seed heads on downy brome (*Bromus tectorum*), but before seed set. This timing allows a second flush of downy brome to be controlled along with plants in early seed head (this will vary in each state). Follow-up applications may be necessary later in the spring and fall (September-November). Imperative that downy brome be controlled to inhibit seed production on sites.

**Application:** Sprayers and individual spray nozzles should be carefully calibrated before application as recommended on product labeling. Use enough water carrier for complete coverage, but not to the point of runoff. Ground application can be accomplished using ATV or pick-up (boom and wand) to carefully control rate and coverage. Operate equipment at ground speeds no greater than 5 mph. Performance may be improved by reducing speed in areas of heavy weed infestations to ensure adequate coverage. Better results may be obtained if two applications are made in opposite directions.

**Locations:** For experiment I (Native Plant Screening Trials), 3 of 6 blocks (each 70’ x 120’) at each site (low and high precipitation) will be treated each year with herbicide for a total of ~0.6 acres each year. For experiment II (Competitive Interactions), the entire experimental area encompassing 6 blocks at both sites (low and high precipitation) will be treated each year (see diagrams). For the core experiment (low precipitation study areas in NV and OR, high precipitation study area in UT), these areas encompasses ~2.5 acres. For the intensive experiments (high precipitation study area in Nevada, both study areas in Idaho, high precipitation study area in Oregon, and low precipitation study area in Utah), these areas encompass ~3.6 acres in NV and ~2.7 acres for the other states.